INSTALLER / CONSUMER SAFETY INFORMATION

Please read this manual before installing and using appliance.

WARNING: If the information in this manual is not followed exactly, a fire or explosion may result causing property damage, personal injury or loss of life.

FOR YOUR SAFETY

Installation and service must be performed by a qualified installer, service agency or the gas suppler.

WHAT TO DO IF YOU SMELL GAS

- **Shut off the gas supply.**
- **Do not try to light any appliance.**
- **Do not touch any electrical switch; do not use any phone in your building.**
- **Immediately call your gas supplier from a neighbor's phone. Follow the gas supplier's instructions.**
- **If you cannot reach your gas supplier, call the fire department.**

Do not store or use gasoline or other flammable vapors and liquids in the vicinity of this or any other appliance.

WARNING: Improper installation, adjustment, alteration, service or maintenance can cause injury or property damage. Refer to this manual for correct installation and operational procedures. For assistance or additional information consult a qualified installer, service agency, or the gas supplier.

This is an unvented gas-fired heater. It uses air (Oxygen) from the room which it is installed. Provisions for adequate combustion and ventilation air must be provided.

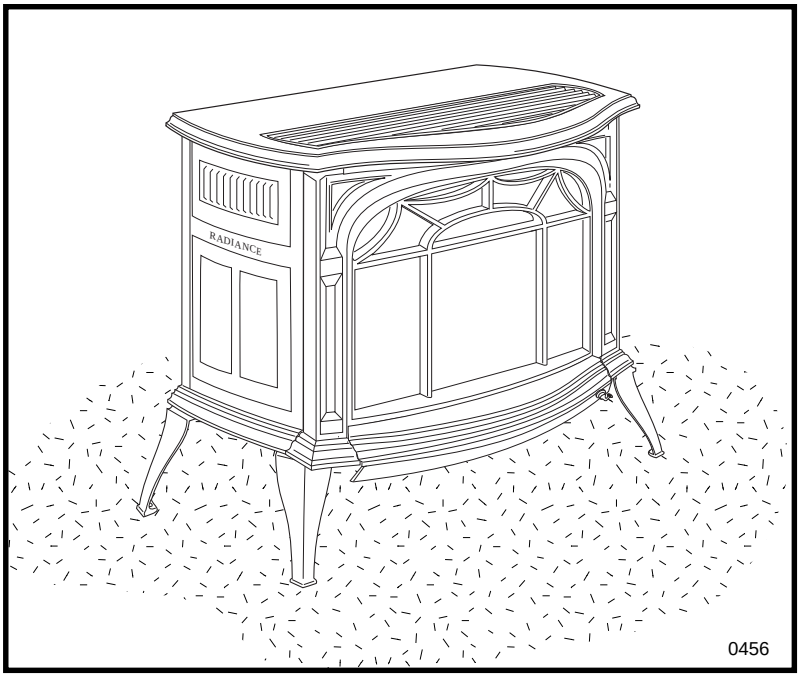
Installation and service must be performed by a qualified installer, service agency or the gas supplier.

VERMONT Castings

Radiance

Vent Free Gas Heater

Model RUVS40



Homeowner's Installation and Operating Manual

DESIGN CSA CERTIFIED

Tested and listed to ANSI Z21.11.2b-1998, Unvented Heaters

INSTALLER: DO NOT DISCARD THIS MANUAL - LEAVE FOR HOMEOWNER

3000-0456c/1000

ATTENTION CONSUMER:

In order to ensure safe and effective installation, this unit must be installed only by a qualified agency, individual, firm, corporation, or company that is experienced in the installation, repair and servicing of this type of appliance and is familiar with the building codes and installation techniques appropriate in your area. Contact your hearth products dealer or local gas supplier for the name of a qualified service person.

INSTALLER:

Please read this manual carefully before you begin the installation procedures. Failure to follow instructions may result in property damage, bodily injury or loss of life. This manual contains important user information. Keep this manual with the fireplace after installation is complete.

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Specifications

Radiance Unvented Gas Heater RUVS40

Fuel Type:	NG	LP
Manifold Pressure; Min. / Max.:	1.7"/3.5"	5.4"/11.0"
Min. Inlet Supply Pressure for adjustment::	5.0" W.C.	11.0" W.C.
Max. Inlet Supply Pressure for adjustment:	8.0" W.C.	12.0" W.C.
Min. Output, BTU/hr:	26,000	26,000
Max. Output, BTU/hr:	35,000	35,000
Ignition :	Piezo	
Firebox Weight / shipping:	175 lbs.	

This appliance may be installed in an aftermarket* manufactured (mobile) home, where not prohibited by state or local codes.

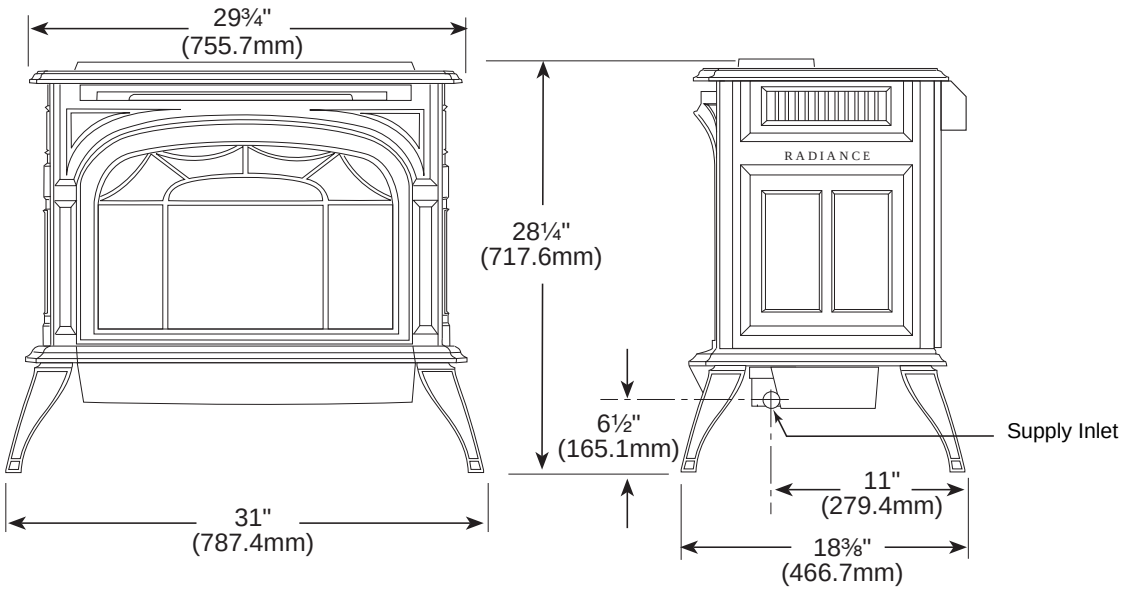
This appliance is to be used only with the type of gas specified on the rating plate which is attached to the rear panel. This appliance is not convertible for use with other gases.

Available Optional Accessories:

- Fan Kit #2767 / FK26
- Glass Panel / Catalyst Kit RGDCK

**Aftermarket: Completion of sale, not for purpose of resale, from the manufacturer.*

Dimensions



Drawing Not to Scale

ST181

Fig. 1 Radiance Vent Free dimensions.

Safety Information

Warnings

IMPORTANT: Read this owner's manual carefully and completely before trying to assemble, operate, or service this heater. Improper use of this heater can cause serious injury or death from burns, fire, explosion, electrical shock, and carbon monoxide poisoning.

DANGER

CARBON MONOXIDE POISONING MAY LEAD TO DEATH!

Carbon Monoxide Poisoning: Early signs of carbon monoxide poisoning resemble the flu, with headaches, dizziness, or nausea. If you have these signs, the heater may not be working properly. Get fresh air at once! Have the heater serviced. Some people are more affected by carbon monoxide than others. These include pregnant women, people with heart or lung disease or anemia, those under the influence of alcohol, and those at high altitudes.

Make certain you read and understand all Warnings. Keep this manual for reference. It is your guide to safe and proper operation of this heater.

1. **Install only in accordance with National Fuel Gas Code, ANSI Z223.1 - latest edition. (Exception: Do not derate this appliance for altitude. This appliance has been tested and listed for use in altitudes up to 10,000 feet. Maintain the manifold pressure at 3.5 inches W.C. for Natural Gas and 11 inches W.C. for LP gas.)**
2. **Use only the installation instructions provided by the manufacturer for this appliance. Installation and repair should be done by a qualified service person. The appliance should be inspected before use and at least annually by a professional service person. More frequent cleaning may be required due to excessive lint from carpeting, bedding material, etc. It is imperative that control compartments, burners and circulating air passageways of the appliance be kept clean.**
3. **WARNING: Any change to this heater or its controls can be dangerous. DO NOT make modifications to any heater or associated parts.**
4. **DO NOT install this heater in a bedroom or bathroom.**
5. **Due to high surface temperatures, DO NOT install this heater**
   - **in a recreation vehicle,**
   - **where curtains, furniture, clothing, or other flammable objects are less than 36 inches from the front, top, or sides of the heater,**
   - **in high traffic areas,**
   - **in windy or drafty areas.**
6. **DO NOT place clothing or other flammable material on or near the appliance.**
7. **This heater needs fresh, outside air ventilation to operate properly. See Fresh Air Requirements on pages 6 and 7.**
8. **If heater shuts off, heater may not have enough fresh air ventilation. Provide more fresh air. If heater keeps shutting off, see Troubleshooting, page 17.**
9. **DO NOT operate this heater**
   - **where flammable liquids or vapors are used or stored**
   - **under dusty conditions.**
10. **The heater becomes very hot when operating. Alert children and adults to stay away from hot surfaces to avoid burns or clothing ignition. The heater will remain hot for a time after shut-down. Allow surface to cool before touching.**
11. **Carefully supervise young children when they are in the room with the heater.**
12. **Do not use the heater if any part has been exposed to or under water. Immediately call a qualified service technician to inspect the room heater and to replace any part of the control system and any gas control which has been under water.**
13. **DO NOT operate the heater if any log is broken or damaged.**
14. **Turn heater off and let cool before servicing. Only a qualified service person should service and repair heater.**
15. **If so equipped, DO NOT operate this appliance with the optional glass panel removed. If the glass panel is removed from the appliance for service or cleaning, it must be replaced before operating the heater.**

General Information

Vent Free Features

The Radiance RUVS40 is an unvented gas heating appliance tested and listed to the ANSI standard Z21.11.2a 1997. This appliance is specifically configured to burn either Natural Gas or Propane fuel, as indicated on the metal rating plate attached to the rear shroud. The Radiance RUVS40 is not fuel convertible.

The Radiance burner controls are conveniently located and easy to operate. As illustrated in Figure 1, the front lip of the heater swings down to reveal the gas valve controls and piezo pilot ignitor. Once the standing pilot is lit, the heater can be set for either manual or thermostatic operation using the convenient toggle switch (Fig. 3) at the rear of the unit. A variable regulator allows you to adjust burner heat output between HIGH, (35,000 BTU), and LOW, (26,000 BTU). See the Operation section for details.

A push button Piezo ignitor is used to light the standing pilot. The pilot incorporates an Oxygen Depletion System (ODS/pilot) which will shut off gas flow to the burner in the event that sufficient fresh air becomes unavailable for continued safe operation.

Quick Installation

Your Radiance Vent Free heater is shipped completely assembled and ready for installation. You must, however, locate the heater in accordance with the specifications detailed in the next section of this manual. **Connection to the gas supply must be made only by a qualified gas technician and only after verification that the minimum combustion air and ventilation requirements have been met.**

Optional Fan Kit #2767 /FK26

This accessory will help distribute heated air from within the firebox out into the room. The fan is controlled by a snapstat that turns power on and off as the firebox temperature rises above and falls below a preset temperature. A rheostat provides for variable fan speeds up to 160 cfm.

Optional Glass / Catalyst Kit RGDCFK

The glass panel replaces the standard screen. The catalytic combustor installs easily into the upper manifold above the firebox. Ask your dealer for details.

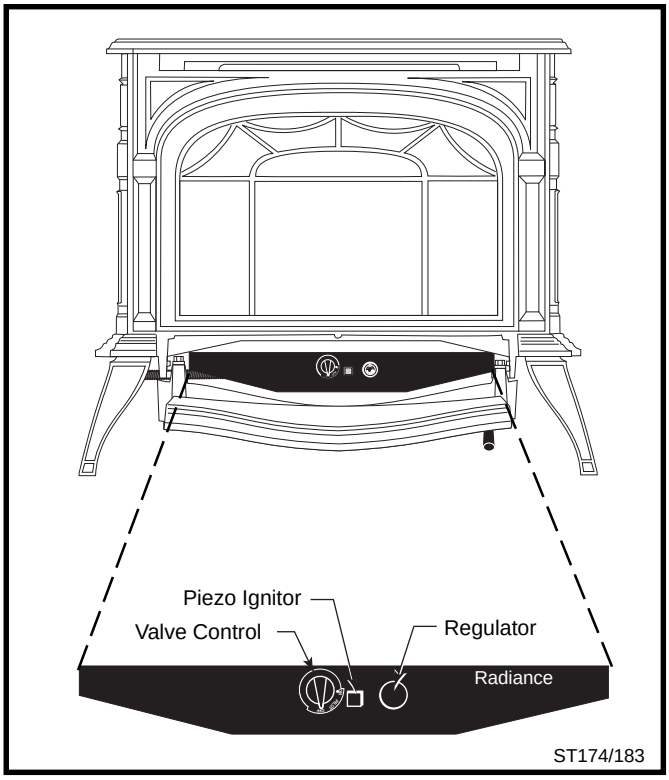


Fig. 2 Radiance rating plate and control panel.

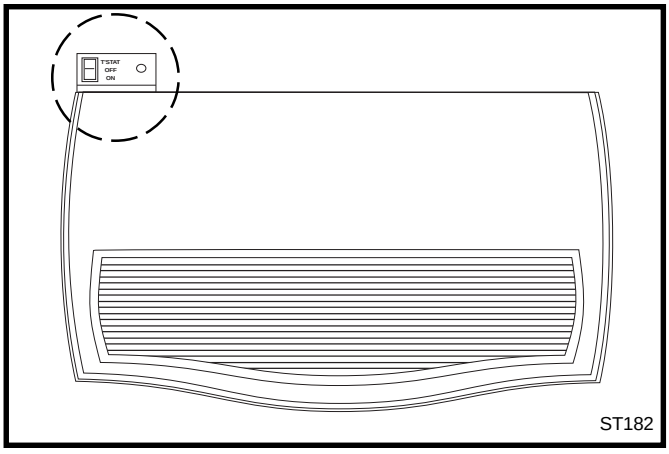


Fig. 3 Remote burner switch.

Installation Requirements

WARNING

THIS HEATER MUST HAVE FRESH AIR FOR PROPER OPERATION. IF NOT, POOR FUEL COMBUSTION COULD RESULT. READ THE FOLLOWING INSTRUCTIONS TO INSURE PROPER FRESH AIR FOR THIS AND OTHER FUEL-BURNING APPLIANCES IN YOUR HOME.

Fresh Air Requirements for Combustion and Ventilation

Modern construction standards have resulted in homes that are highly energy-efficient and that allow little heat loss. Your home needs to breathe, however, and all fuel-burning appliances within it require fresh air in order to function properly and safely. Exhaust fans, clothes dryers, fireplaces, and other fuel burning appliances all use the air inside the building. If the available fresh air is insufficient to meet the demands of these appliances, problems can result.

The Radiance Unvented heater has specific fresh air requirements. ***You must determine that these fresh air requirements will be met within the space where the appliance will be installed.*** The following information will help you insure that adequate fresh air is available for the heater to function properly.

Provide For Adequate Ventilation

Any space within a home can be classified in the following categories:

1) Unusually Tight Construction
2) Confined Space
3) Unconfined Space

First, determine which classification defines the intended space.

Unusually Tight Construction

You must provide additional fresh air if the space falls into this classification. *Unusually Tight Construction* is defined as construction wherein:

a. walls and ceilings exposed to the outside atmosphere have a continuous water vapor retarder with a rating of one perm or less with openings gasketed or sealed *and*

b. weather stripping has been added on openable windows and doors *and*

c. caulking or sealants are applied to areas such as joints around window and door frames, between sole plates and floors, between wall-ceiling joints, between wall panels, at penetrations for plumbing, electrical, and gas lines, and at other openings.

If your home meets all of the three criteria above, you must provide supplemental fresh air for the appliance from outside the home as detailed on page 7, B.

If your home does not meet the above criteria, follow the procedure below.

Determine if You Have a Confined or Unconfined Space

Use the following formula to determine if you have a confined or unconfined space.

Space is defined as the room in which you will install the heater plus any adjoining rooms with doorless passageways or ventilation grilles between the rooms.

The National Fuel Gas Code defines a confined space as a space whose volume is less than 50 cubic feet per 1,000 BTU per hour, (4.8 m3 per kw), of the aggregate input rating of all appliances installed in that space and an unconfined space as a space whose volume is not less than 50 cubic feet per 1,000 BTU per hour, (4.8 m3 per kw), of the aggregate input rating of all appliances installed in that space. Rooms communicating directly with the space in which the appliances are installed, through openings not furnished with doors, are considered a part of the unconfined space.

1. Determine the volume of space, (length x width x height). Include adjoining rooms connected by doorless passageways or ventilating grilles.

Example:

A room that is 18' x 12' x 8' has a volume of 1728 cubic feet, (length x width x height). An adjoining open kitchen that is 10' x 12' x 8' has a volume of 960 cubic feet. An adjoining open dining room is 12' x 12' x 8' with a volume of 1152 cubic feet. The total space volume is 3840 cubic feet. (1728 + 960 + 1152).

2. Divide the volume of space by 50 cubic feet. The result is the maximum BTU/Hr that the space can support.

Example:

3840 divided by 50 = 76.8 or 76,800 BTU/Hr.

3. Add the BTU/Hr ratings of all fuel-burning appliances installed in the same space, including the following:

Gas Water Heater	Gas Furnace
Gas Fireplace Logs	Unvented Gas Heater
Vented Gas Heater*	Other Gas Appliances*

***** *Do not include Direct Vent appliances as these utilize outside air for combustion and vent to the outdoors.*

Example:

Gas Range	55,000 BTU/Hr
Unvented Heater	+33,000 BTU/Hr
Total	88,000 BTU/Hr

4. Compare the maximum BTU/Hr rating the space can support with the total BTU/Hr used by the appliances.

Example:

76,800 BTU/Hr - max. the space can support
88,000 BTU/Hr - total used by appliances

In this example, the maximum BTU/Hr that the space can support is less than the total used by the appliances, the space is considered to be ***Confined space***. Additional air must be provided to meet the requirements of the Unvented heater.

A confined space may be ventilated in two ways:

A) Open up or provide at least two ventilating grilles to an adjoining unconfined space. Use any of the options illustrated in Figure 4.

Each of the two grilles must provide an opening of at least 50 square inches, with all opening dimensions being at least 3". One grille must be located within 12" of the ceiling; the other within 12" of the floor. (If the total exceeds 100,000 BTU/Hr, additional grilles will be required.)

B) Vent the room directly to the outdoors. (Provide one square inch of opening for each 4,000 BTU/hr.

If the total BTU/Hr used by the appliances is less than the maximum BTU/Hr the space is able to support, the room meets the Unconfined space criteria and no further ventilation is required.

For further information on ventilation guidelines and sizing specifications follow the National Fuel Gas Code NFPA 54/ANSI Z223.1 Section 5.3.

WARNING

THIS HEATER SHALL NOT BE INSTALLED IN A CONFINED SPACE UNLESS PROVISIONS ARE PROVIDED FOR ADEQUATE COMBUSTION AND VENTILATION AIR.

IF THE AREA IN WHICH THE HEATER MAY BE OPERATED IS SMALLER THAN THAT DEFINED AS AN UNCONFINED SPACE, PROVIDE ADEQUATE COMBUSTION AND VENTILATION AIR BY ONE OF THE METHODS DESCRIBED IN THE NATIONAL FUEL GAS CODE, ANSI Z223.1, 1992, SECTION 5.3.

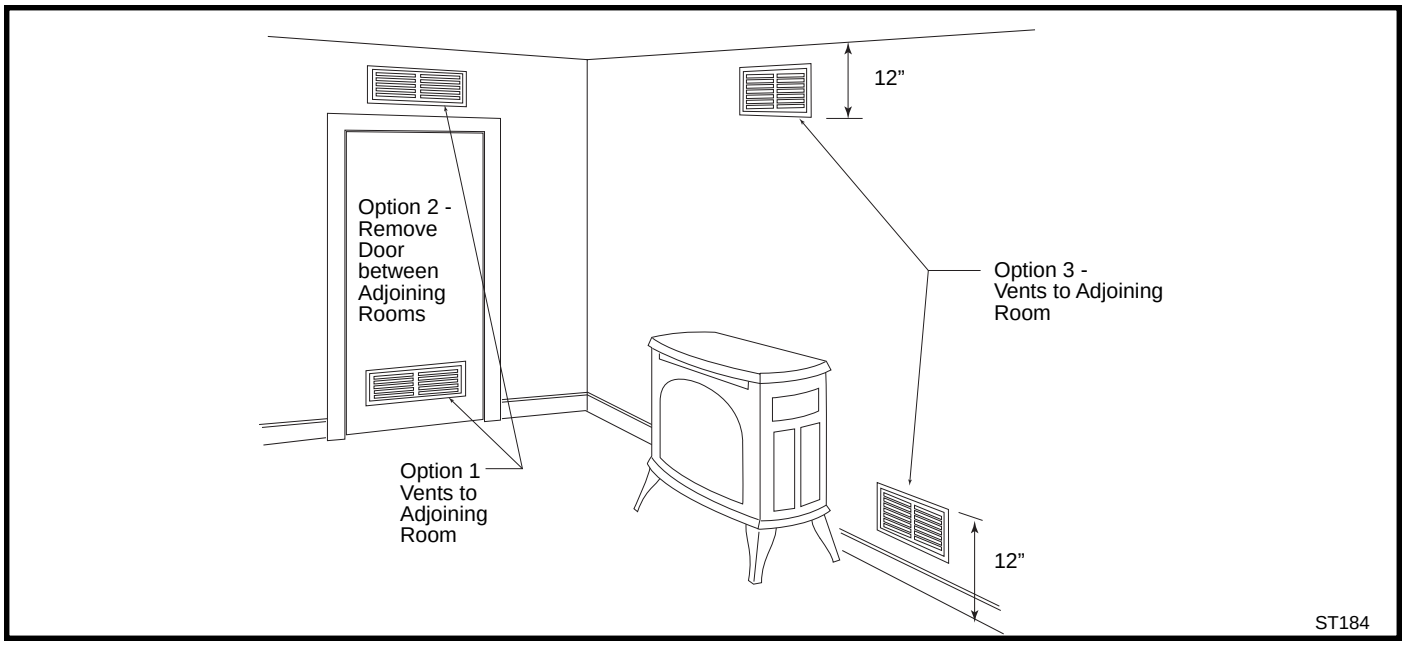


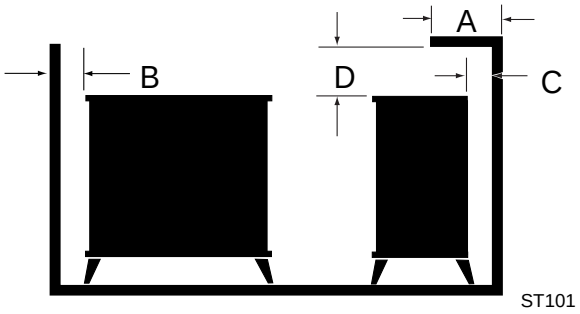
Fig. 4 Vent options to provide additional air.

Clearance Requirements

Minimum Clearances to Combustible Materials

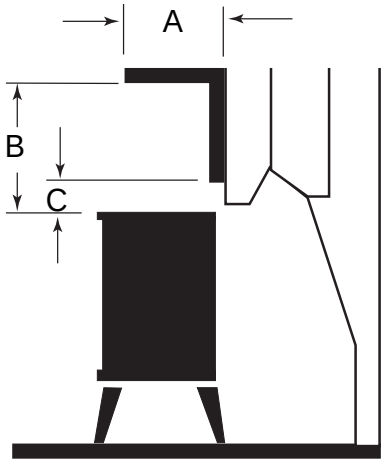
Maintain clearance, (empty space), between combustible materials and the heater as specified below.

Freestanding Stove



A: Maximum Mantel Depth ..... 7½" (190.5mm)
B: To Side Wall / Trim* ..... 4" (101.6mm)
C: To Rear Wall ..... 4" (101.6mm)
D: To Mantel / Trim* ... 16" (406.4mm) / 2" (50.8mm)
* Trim is 1" thick max.

Fig. 5 Freestanding Clearances.



A = Depth, Mantel and/or Top Trim
B = Height from top of heater
C = Min. 10"

When:

A = 7½" (190mm) max.
B = 16" (406mm) min.

A = 3" (75mm) max.
B = 11½" (292mm) min.

A = 6" (152mm) max.
B = 14½" (368mm) min.

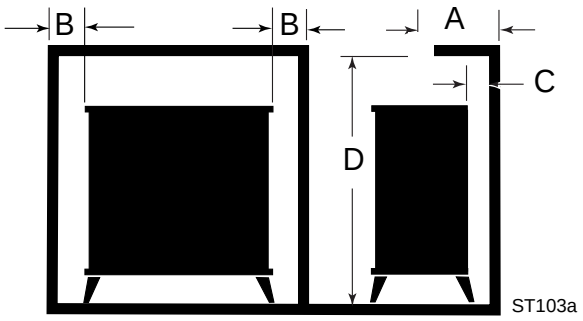
A = 1½" (38mm) max.
B = 10" (254mm) min.

A = 4½" (114mm) max.
B = 13" (330mm) min.

Fig. 6 Mantel Clearances.

Alcove Clearances

The Radiance Unvented heater may be installed in an alcove constructed to maintain the clearances specified below.



A: Maximum Alcove Depth ..... 24" (609mm)
B: To Side Wall ..... 4" (101mm)
C: To Rear Wall ..... 4" (101mm)
D: To Ceiling ..... 60" (1524mm)

Fig. 7 Alcove Clearances.

Hearth Requirements

The Radiance Unvented heater must be installed on rigid flooring. If the appliance is installed on any combustible surface other than wood flooring, such as carpet or tile, a metal or wood panel must be installed to extend the full length and width of the unit. There are no other hearth or floor protection requirements.

WARNING

- **Do not install this heater in a bathroom or bedroom.**
- **Installation of this heater must conform with local codes or, in the absence of local codes, with the National Fuel Gas Code, ANSI Z223.1.**
- **This heater creates warm air currents. These currents move heat to wall surfaces next to the heater. Installing the heater next to vinyl or cloth wall coverings or operating the heater where impurities in the air such as tobacco smoke exist, may discolor walls.**
- **Do not use a blower insert, heat exchanger insert or other accessory not approved for use with this heater.**

Assembly

Read these instructions thoroughly before starting the assembly. Follow procedures in the order given. Inspect the stove for damage before starting the assembly. Do not install this stove if any damage is evident. Contact your dealer immediately.

The Radiance is shipped on its back, mounted to a wooden pallet. It is fully assembled, although packing materials must be removed from the firebox and the Log Set installed. Connection to the gas supply must be performed only by a qualified gas technician who should also verify that adequate ventilation is available to support proper burner function.

Installation of optional accessories, such as the Fan, Glass/Catalyst, or thermostat, is most easily accomplished before the gas supply connection is made.

Tools required

- Stub-handled Phillips screwdriver
- Standard Phillips screwdriver
- Standard flat-blade screwdriver
- Tape measure
- work gloves
- knife

Unpacking the Radiance

Caution: Enamelled castings can chip easily! Handle enamelled castings carefully to avoid damage.

1. Cut the shipping straps.
2. Unpack the top grate and screen from the carton, and set them aside.
3. With the help of an assistant, carefully remove the stove from the pallet and move it close to its final installed position. Lift the stove by the sides. **Do not lift by any part of the stove front.**

Hardware Bag Contents

- Bag of Lava Rocks
- Door Handle & Screw
- Wire Tie

Remove the Front, Screen and Logs

Remove the Front panel, the Screen panel, the Log Set and hardware bag from the firebox before positioning the stove.

1. **Remove the accessory package** from the top of the stove. The manual, hardware package, and lava rocks are packed on top of the firebox. Set these aside.
2. **Remove the Front Plate.** Grasp one side and the bottom, and lift the front plate as a unit (the control door attaches to the stove front). Swing the bottom edge out and away from the stove body, (Fig. 8)

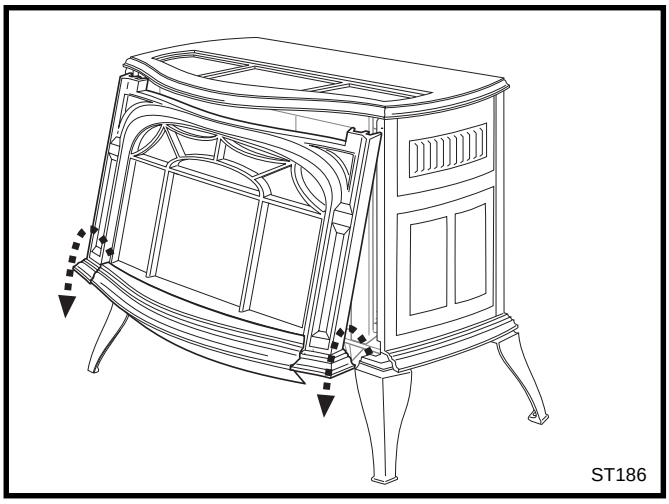


Fig. 8 Remove the front plate.

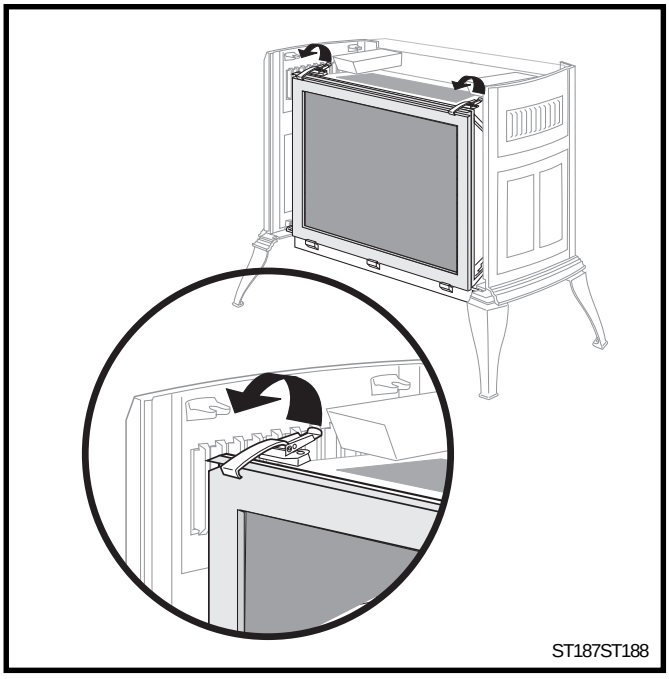


Fig. 9 Release the latches and swing the screen and frame away from the firebox.

3. **Remove the Screen Assembly.** Two compression latches hold the screen frame in place. (Fig. 9) Use a screwdriver to release each latch by gently prying the handle up and forward. Lift the screen frame assembly up off the front of the firebox and set it aside.
4. **Remove the Log Set.** Lift out the package and any packing material from the burner tray and firebox. Unpack the log set and inspect each piece for damage. **DO NOT INSTALL DAMAGED LOGS.** Set the logs aside out of the way.

Install Optional Fan, #2767/FK26

Install the fan kit before the stove is connected to the gas line.

The fan consists of a blower assembly and a rheostat switch that are connected by a wire harness. The blower attaches to brackets at the bottom of the rear shroud. The rheostat installs within the remote switch box, at the top left rear corner.

The fan kit includes a 'snapstat', a temperature-sensing switch which will be mounted to the blower duct just below the top plate of the stove. The snapstat automatically turns the fan on or off at approximately 109°F.

The rheostat provides a range of fan speed settings from OFF (which overrides the snapstat function) to high.

Kit Contents used with the RUVS40:

- Fan assembly with rheostat and snapstat
- wire tie
- control knob
- retaining collar

These directions are oriented facing the rear of the stove. Position the fan underthe rear shroud as shown in Figure 10.

1. Remove the fan bracket. Remove the four sheet metal screws (A) to detach the bracket (AA) from the Rear Shroud. (Fig. 10)

2. Open the left side of Rear Shroud. (Fig. 10)

- Remove the round head phillips screws (B) that secure the shroud to the side of the stove.
- Remove the sheet metal screw (C) that fastens the switchbox to the rear shroud.
- Remove the two sheet metal screws (D) that secure the inner and outer shroud together. Let the switchbox and wiring hang loosely.

3. Install the Control Switch. (Fig. 10)

- Run the control switch (E) and wire up along the side between the inner and outer shrouds and through the slot at the side.
- Attach the switch to the switch box with the retainer collar and control knob (F).
- Secure the switch box assembly to the rear shroud with the single sheet metal screw (C).

4. Connect Snapstat leads.

- Disconnect the snapstat module (G) from the leads inside the snapstat bracket (H).
- Bend open the snapstat bracket (H). Use your fingers or needle nose pliers to remove the black plastic grommet from the bracket. Discard the bracket.
- Insert the grommet and wires into the large hole at the bottom right corner of the inner shroud.

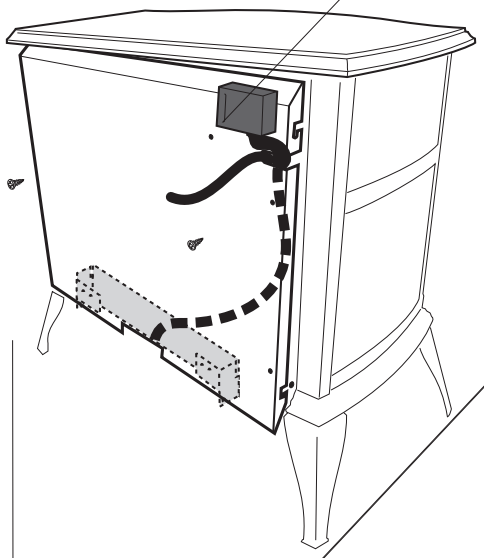


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Fig. 10 Open the rear shroud and install fan control switch.

- Feed the snapstat wire leads through the grommet into the stove interior. Connect the two wires to the two snapstat extension leads attached to the inner shroud.

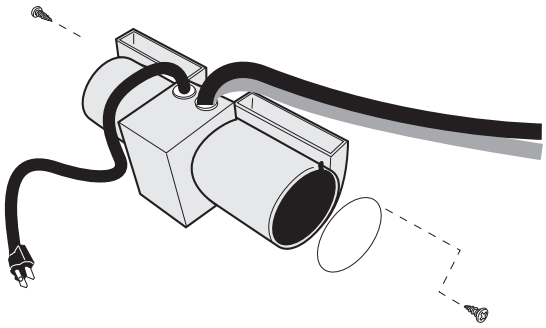
5. Resecure the Rear Shroud panels.

• Reinstall and tighten the two sheet metal screws (D, Fig. 10) that secure the inner and outer shrouds together.

• Secure the upper corner of the shroud and switch box to the side of the stove using a 1/4 -20 x 1/2" round head phillips screw, previously removed. (B, Fig.10) Finally, replace the lower screw.

6. Attach the fan assembly to the bracket removed earlier. Remove the sheet metal screws that secure the finger guards at each end of the fan housing. Use these screws to attach the fan to the bracket. (Fig. 12)

• Position the fan assembly so that the ducts slide between the inner and outer shroud. The inner shroud should engage with the two slots in the ends of the bracket so that bracket and shroud are interlocked. (Fig.14) Secure the bracket with the four sheet metal screws previously removed.



7. Install snapstat. (Fig. 13) Looking through the stove front, locate the snapstat mounting screws on the side of the left air duct under the top plate. Remove the front screw (A), but only loosen the rear screw. Slip the snapstat under the rear screw, replace the front screw, and tighten both.

• Detach the extension wire from the retainer clip at the rear. Connect the female flag connectors (B) of the snapstat extension to the snapstat module. Confirm that the wires are running to the back and away from the top of the stove.

8. Plug the power cord into a standard grounded 110-volt household outlet. If the fan control knob is not turned to the OFF position, the fan will turn on when the temperature at the snapstat reaches approximately 109°F.

WARNING

The optional fan kit is equipped with a three-prong (grounding) plug for your protection against shock hazard and should be plugged directly into a properly grounded three-prong outlet. Do not cut or remove the grounding prong from this plug.

Thermostat Connection (optional)

Use only a millivolt rated thermostat. Check the table below for the appropriate gauge thermostat wire to use for the length of lead required in your installation.

Thermostat Wire Gauge	/	Maximum Run
18		40 feet
20		25 feet
22		16 feet

1. Install the wall thermostat in the desired location and run the wires to the stove location. Terminate these leads with 1/4" spade connectors.
2. Connect the thermostat wires to the two 1/4" female connectors extending out of the control valve wire harness. These wires are accessible from under the left rear side of the stove. Either thermostat wire may connected to either terminal. (Fig.16)
3. Place the control switch on the rear of the stove in the “T’STAT” position and set the wall thermostat at its lowest setting until the heater is ready for operation.

Connect the Gas Line

Gas connection should be made in accordance with the current edition of the National Fuel Gas Code, ANSI Z223.1. Since some municipalities have additional local codes, be sure to consult your local authority.

CAUTION

• The gas line should be connected only by a qualified gas technician. Test to confirm manifold pressures as given below.

• There must be a gas shutoff valve installed between the stove and the supply line.

With natural gas, use a 3/8” or 1/2” natural gas supply line with an input of 35,000 BTUs at a manifold pressure of 3.5” W.C. and minimum inlet supply for adjustment of 5.0” W.C.

With propane, use a 3/8” or 1/2” propane gas supply line with an input of 35,000 BTUs at a manifold pressure of 11.0” W. C. and minimum inlet supply for adjustment of 11.0” W.C.

1. **Remove the valve coverplate.** Use a stub handle phillips screwdriver to loosen the two retainer screws and pull the coverplate forward. (Fig. 17)
2.

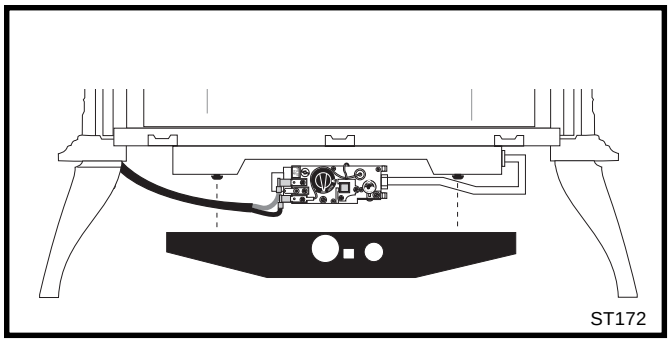


Fig. 17 Remove the valve cover plate.

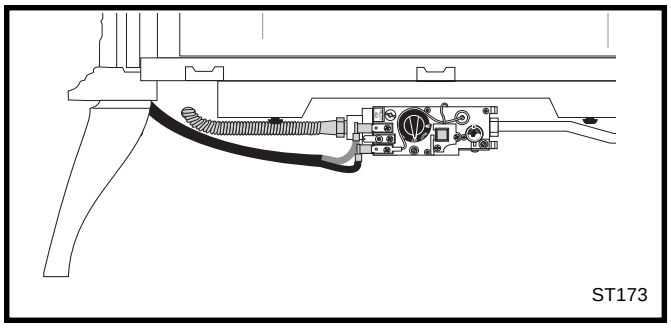


Fig. 18 Flexible gas line connection.

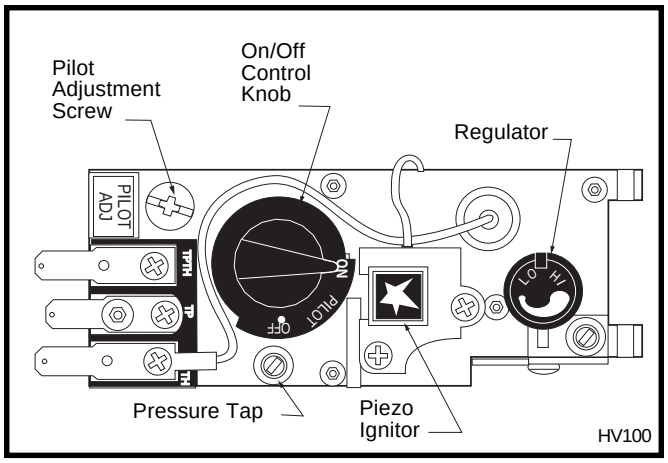


Fig. 19 The gas control valve includes a captured screw-type pressure test point. A pressure test point upstream from the control valve is not required.

Install the Logs

Install the logs in sequence as shown below. The log set includes six sections: the rear log, left and right middle logs, left and right ember logs, and an upper log. There is also a bag of lava rocks which simulate charcoal and embers.

1. Install the rear log (#1, Fig. 20) by engaging holes on its bottom surface with pins on the sheet-metal shelf at the back of the firebox.
2. Install the left and right middle logs (#2 and #3, Fig. 20) by engaging holes on their bottom surfaces with pins on the burner brackets.

3. Push the burner assembly fully to the rear. There should be a gap of about 13/16” between the front of the burner and the inside front wall of the firebox. Place the two front ember log sections (#4 and 5, Fig. 21) in the slot at the front of the firebox, just in front of the burner.

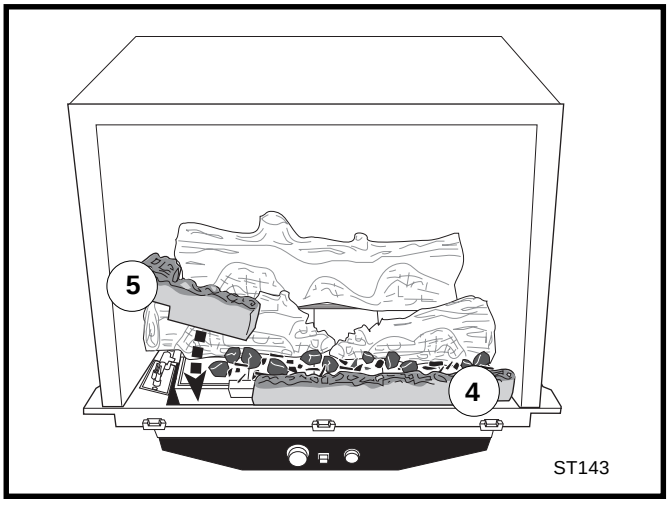
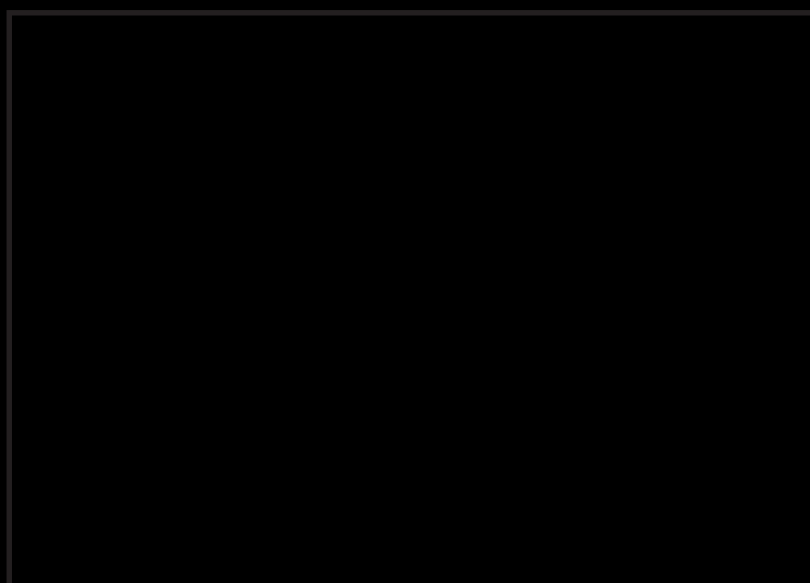


Fig. 21 Install the front ember logs.



Operation

Your First Fire

Read these instructions carefully and familiarize yourself with the burner controls of this heater.

The Radiance uses a Honeywell control valve that allows thermostatic regulation. A separate Piezo ignitor generates a spark at the pilot orifice when the button is pushed. Figures 26 - 30 illustrate the operating positions for the RUVS40 controls.

Set the 3-way burner control switch on the back of the appliance to the OFF position (midpoint). Locate the Pilot assembly on the right side behind the burener. (Fig. 31) Follow the lighting instructions on page 16 exactly. Use the regulator control to adjust heat output.

During the first fire, it is not unusual to smell some odor associated with new logs, paint and metal being heated. Odors should dissipate within a few hours or so, however, you can open a window to provide plenty of fresh air to alleviate this condition.

Pilot and Burner Inspection

Each time you light your Radiance, check that the pilot flame and burner flame pattern appear as in Figures 31 and 33. If flame patterns are incorrect, turn the heater off and use the procedures in the Troubleshooting section of this manual to determing a solution. Do not operate the heater until the pilot flame is correct.

Follow regular maintenance procedures as de-
(F3ction

FOR YOUR SAFETY READ BEFORE LIGHTING

WARNING: IF YOU DO NOT FOLLOW THESE INSTRUCTIONS EXACTLY, A FIRE OR EXPLOSION MAY RESULT CAUSING PROPERTY DAMAGE, PERSONAL INJURY, OR LOSS OF LIFE.

A. This appliance has a pilot. When lighting the pilot, follow these instructions exactly.

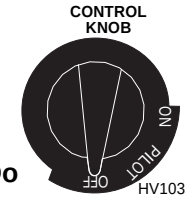
B. BEFORE OPERATING smell all around the appliance area for gas. Be sure to smell next to the floor because some gas is heavier than air and will settle on the floor.
WHAT TO DO IF YOU SMELL GAS.
- **Shut off the gas supply.**
- **Do not try to light any gas appliance.**
- **Do not touch any electric switch; do not use any phone in your building.**
- **Immediately call your gas supplier from a neighbor's phone. Follow the gas supplier's instructions.**
- **If you cannot reach your gas supplier, call the fire department.**

C. Use only your hand to turn the gas control knob. Never use tools. If the knob will not turn by hand, don't try to repair it. Call a qualified service technician. Force or attempted repair may result in a fire or explosion.

D. Do not use this appliance if any part has been under water. Immediately call a qualified service technician to inspect the appliance and to replace any part of the control system and any gas control that has been under water.

LIGHTING INSTRUCTIONS

1. STOP! Read the safety information above on this panel.



2. If applicable, turn thermostat to lowest setting or set burner switch to "OFF" position.

3. Push in gas control knob slightly and turn clockwise ↷ to "OFF."

NOTE: Knob cannot be turned from "PILOT" to "OFF" unless knob is pushed in slightly. Do not force.

4. Wait five (5) minutes to clear out any gas. If you then smell gas, STOP! Follow "B" in the safety information above on this panel. If you don't smell gas, go to the next step.

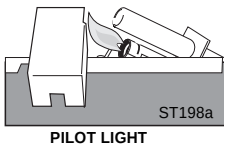
5. Turn knob on gas control counterclockwise ↶ to "PILOT." Push in control knob all the way and hold in. Immediately light the pilot by pushing the square ignitor button. Continue to hold the control knob in for about one (1) minute after the pilot is lit. Release knob and it will return back up. Pilot should remain lit. If it goes out, repeat steps 3 through 5.

6. • If knob does not pop up when released, stop and immediately call your service technician or gas supplier.

• If the pilot will not stay lit after several tries, turn the gas control knob clockwise ↷ to "OFF" and call your service technician or gas supplier.

7. Turn gas control knob counterclockwise ↶ to "ON."

8. Set the burner control switch to "ON" or set to "T'STAT" and adjust wall thermostat.



TO TURN OFF GAS TO APPLIANCE

1. Set the burner control switch to "OFF" if service is to be performed.

2. Push in gas control knob slightly and turn clockwise ↷ to "OFF." NOTE: Knob cannot be turned from "PILOT" to "OFF" unless knob is pushed in slightly. Do not force.

Trouble-

Warning

Turn OFF heater and allow to cool completely before servicing.

Condition	Possible Cause	Solution
No spark at Pilot when Ignitor is operated	1.Ignition Electrode is disconnected from ignition wire, broken o incorrectly positioned.	1. Inspect and reconnect, replace or repair as necessary.
	2. Piezo Ignitor nut is loose.	2. Tighten the nut to establish secure contact to the valve bracket.
	3. Ignitor wire is broken.	3. Replace wire.
	4. Bad Piezo Ignitor.	4. Replace Piezo ignitor.
The lignitor Electrode sparks, but Pilot does not light	1. Gas supply is turned off or supply line shutoff valve is closed.	1. Turn on gas supply or open suppy line shutoff valve.
	2. Control KNob is not in PILOT position.	2. Turn Control Knob to PILOT.
	3. Contol Knob not pressed in while in PILOT position.	3. Press Control Knob in while in the PILOT position.
	4. Air present in gas lines.	4. Continue holding in Control Knob and repeat ignition procedure until air is bled from the lines.
	5. Inlet supply pressure is not within correct settings.	5. Call local gas supplier. Adjust inlet supply pressure to specification: NG; 5” W.C. - 8” W.C. (5”W.C. - 7” W.C. at elevations over 8000 ft.) LP; 11” W.C. - 12” W.C.
	6. Other conditions that should be identified only by a qualified gas technician.	6. Call qualified gas technician.
Pilot lights but flame goes out when Contorl Knob is released.	1. Control Knob not fully depressed or held in long enough.	1. Depress Control Knob fully and hold in for a full 30 seconds.
	2. Gas supply line shutoff valve is not fully open.	2. Fully open gas supply line shutoff valve.
	3. Thermocouple connection is loose at the Control Valve.	3. Inspect and tighten securely.
	4. Pilot flame does not touch the Thermocouple. This can be caused by: a. Incorrect gas pressure, and/or b. other conditions that should be identified only by a qualified service technician.	4. A) Contact the local gas company. Inlet supply pressure should be between 5” W.C. and 8” W.C. for NG (5” W.c. - 7” W.C. over 8000 ft elevation) and 11” W.C. - 12” W.C. for LP. Adjust as necessary. B) Call local gas service technician.
	7. Thermocouple is damaged.	5. Call local gas service technician.
	8. Control Valve is damaged.	6. Call local gas service technician.

Troubleshooting (continued)

Condition	Possible Cause	Solution
Pilot lights but Main Burner does not	1. Gas supply line shutoff valve is not fully open.	1. Fully open gas supply line shutoff valve.
	2. Foreign material is blocking Burner ports.	2. Inspect and clear debris away from Burner ports.
	3. Main Burner orifice is clogged.	3. Call local gas service technician.
	4. Thermostat or remote switch not activated on RUVS40.	4. Set thermostat to higher temperature or check remote switch.
Main Burner shuts off and Pilot flame goes out while in operation	1. Insufficient fresh air.	1. Determine that adequate ventilation exists to provide sufficient fresh air. Open a window or provide additional ventilation. (See Fresh Air Requirements, page 4-5)
	2. Incorrect inlet supply pressure.	2. Contact the local gas company. Adjust inlet supply pressure to specification: NG; 5” W.C. - 8” W.C. (5” W.C. - 7” W.C. at elevations over 8000 ft.) LP; 11” W.C. - 12” W.C.

Warning

- **If you smell gas:**
- **Shut off gas supply**
- **Do not try to light any appliance**
- **Do not touch any electrical switch; do not use any phone in your building.**
- **Immediately call your gas supplier from a neighbor’s phone. Follow the gas supplier’s instructions.**
- **If you cannot reach your gas supplier, call the fire department.**

Odor During Operation

Neither natural gas nor LP gas give off an odor when burned. The nature of a vent free combustion system, however, is such that odors may occasionally be produced during heater operation when impurities exist in the immediate area. Cleaning solutions, paint, solvents, cigarette smoke, adhesives, new carpet or textiles, etc., all can create fumes. These fumes may mix with combustion air and can create odor. Such odors will disappear over time, however, the condition can be alleviated by opening a window or otherwise providing additional ventilation to the area.

If odors persist and you are unable to locate the source, contact a qualified gas service technician.

Maintenance

Your Radiance Vent Free heater will provide years of service with minimal upkeep. The following procedures will help ensure that your heater continues to perform safely and efficiently.

Firebox Cleaning and Inspection

Cleanliness is critical to correct operation of the heater. The log set, burner, valve controls and air circulation areas must all be kept free of dust and unobstructed by debris. Inspect these areas before each use and clean whenever accumulation is evident. Follow the simple procedure outlined below.

Frequent cleaning may be necessary in living environments subject to excessive carpet lint or pet hair. For example, if you live with a dog that sheds continuously, you will need to inspect the burner area frequently and clean it as often as the accumulation requires. **In extreme conditions, it may be necessary to clean the burner and log set monthly or bi-weekly.**

This appliance should be inspected and thoroughly cleaned annually by a qualified gas technician.

Cleaning Procedure

1. Turn the burner OFF and let the heater cool completely before cleaning.
2. Lift the Front plate up and then swing the bottom out to disengage it from the heater shell. (Fig. 8, page 9)
3. Remove the screen or glass panel by releasing the two upper retainer latches (A). Lift the panel up and off of the firebox frame. (Fig. 34)
4. Carefully inspect the log set for damage. Contact your local dealer if any damage is evident. **DO NOT OPERATE THE HEATER WITH A DAMAGED OR LOOSE LOG SET.**

   Use a soft-bristled brush vacuum cleaner attachment to remove dust or debris from the log set, pilot and burner. Use care as the log set is fragile.
5. Inspect the catalytic combustor at the top of the firebox. Replace the combustor if any damage or deterioration is evident.
6. Replace the screen or glass panel and the front plate. **DO NOT OPERATE THE HEATER WITH THE SCREEN / GLASS PANEL OR FRONT PLATE REMOVED.**

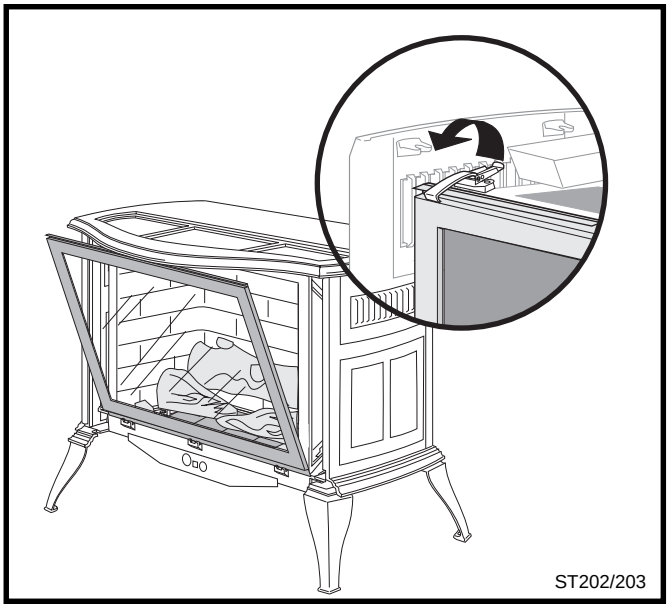


Fig. 34 Remove the screen or glass panel.

Glass Replacement

If so equipped, do not operate this appliance with the glass panel cracked, broken, or removed. Replace damaged glass only with Vermont Castings ceramic glass panel Part No. 160-1290. Follow the Cleaning Procedure instructions regarding parts removal.

Care of Cast Iron

An occasional dusting with a dry rag will help keep the *painted surfaces* looking new. Use high-temperature stove paints, available through your local dealer, to touch-up areas as needed. Clean areas to be painted with a wire brush and be sure to cover the log set, burner and valve assembly. Apply the paint sparingly; two light coats of paint will give better results than a single heavy coat.

Porcelain enamel surfaces should be cleaned with a soft, damp cloth. Do not use abrasive cleaning agents. If necessary, use only a cleaning agent formulated specifically for use on porcelain enamel surfaces.

WARNING

Turn the burner Pilot OFF before applying paint.

WARNING

Dust and debris accumulation can result in poor performance. Inspect the Valve compartment, burner parts and log set frequently and Clean these parts monthly or as often as accumulation warrants.

Catalytic Combustor

The combustor should be cleaned annually to ensure optimal performance. Follow the procedure below.

Tools / Materials:

- phillips screwdriver
- baking soda
- white vinegar
- rubber gloves
- tap water
- distilled water

Remove the combustor module

1. Be sure that the heater is COLD.
2. Remove the front plate, top grille and screen. (Fig. 35)
3. Use the phillips screwdriver to remove the two sheet metal screws that secure the combustor to the top of the firebox. (Fig. 36) Lift the unit up and out through the front of the stove.

Clean the combustor module

1. Obtain a container large enough to completely submerge the combustor module.
2. Fill the container with 13 cups of tap water.
3. Measure 11 tablespoons baking soda and slowly pour it into the water, mixing thoroughly.
4. Place the combustor into the solution and allow to soak for fifteen (15) minutes. If the module is not completely covered, follow steps 1-3 to prepare enough solution to fully submerge the combustor.
5. Rinse the combustor with tap water.
6. Dump the solution and thoroughly rinse the container.
7. Fill the container with enough white vinegar to submerge the combustor module.
8. Place the module into the container and allow it soak for fifteen (15) minutes.
9. Rinse the module with ***distilled water.***
10. Lightly shake the catalytic module to expel excess water. Allow to air dry.

Replace the combustor module

1. Slide the combustor through the front opening of the stove and insert it into the housing on top of the firebox. Secure with the two sheet metal screws.
2. Replace the glass panel and front.

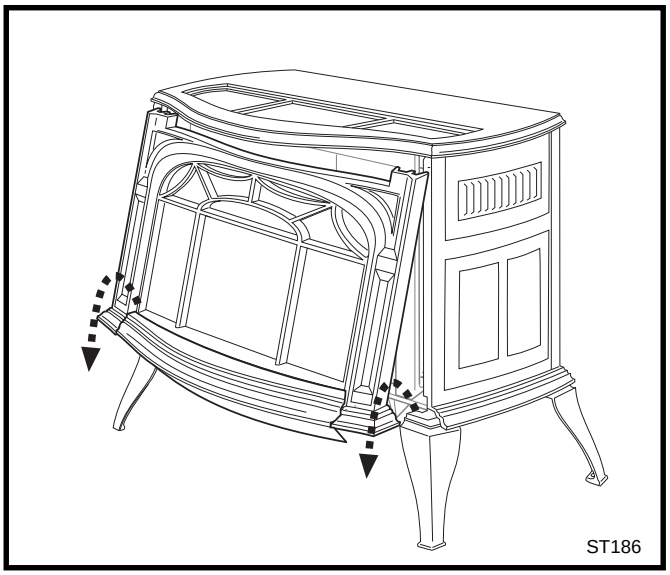


Fig. 35 Remove the front plate and top grille/screen.

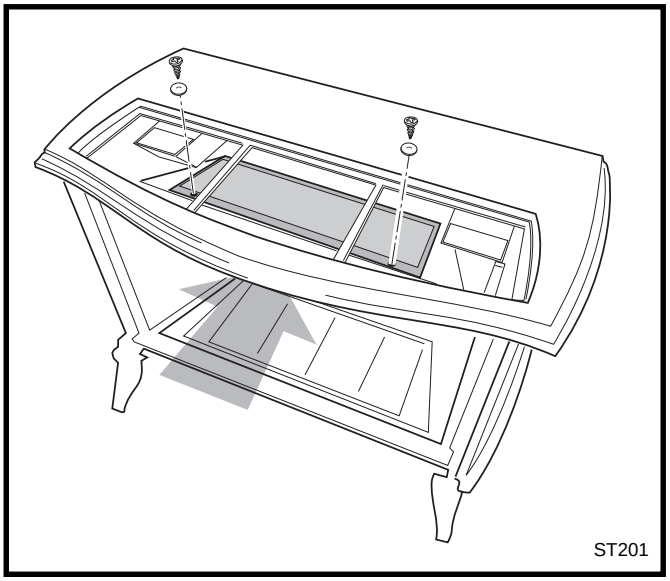
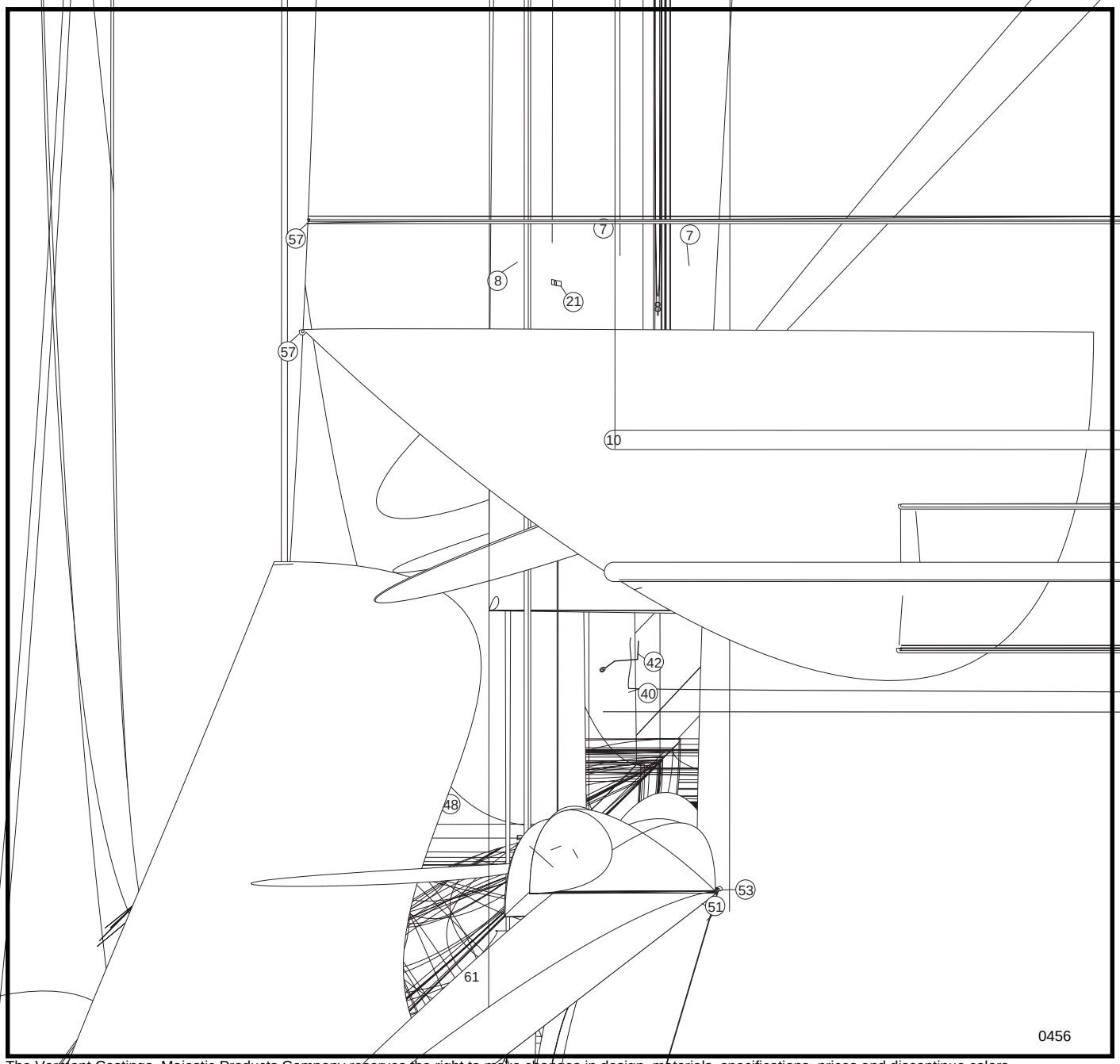


Fig. 36 Remove the catalytic combustor module.



The Vermont Castings, Majestic Products Company reserves the right to make changes in design, materials, specifications, prices and discontinue colors and products at any time, without notice.

1.	Grille	1301192
2.	Grille Screen	1601933
4.	End, Left	1301234
5.	End, Right	1301189
6.	Rear Shroud, Outer	20000862
7.	Duct Cap	20000875
8.	Duct Base	20000876
9.	Heat Shield	20000877
10.	Flue Collector	20000858

11.	Right Latch Bracket	20000859
12.	Left Latch Bracket	20000860
13.	Back Log Bracket	20000991
14.	Right Log Bracket	1409173
15.	Left Log Bracket	30000109
16.	Screen / Glass Frame, Latch (2)	1601992
17.	Screen Frame Assembly	20000883
18.	Switch Box	1408791
19.	Switch, ON/OFF/T'STAT	1601597
20.	Rheostat Plug	1600561

RUVS40 (Continued)

	Item/Model Number	Part Number
21.	Wire Clip	1208618
22.	Wire Tie, Wire Harness/Rear Shroud	1201504
23.	Wire Harness, Burner / Thermostat	1601913
24.	Wire Harness, Snapstat Extension (not shown)	30000453
25.	Gas Log Set	20000853
26.	Back Log	20000856
27.	Right Middle Log	20000854
28.	Left Middle Log	20000855
29.	Top Log	30000037
30.	Left Front Ember Log	20000880
31.	Right Front Ember Log	20000881
32.	Lava Rocks	57897
33.	Burner Assembly	30000446
34.	Manifold Tube Assembly	20000663
35.	Orifice Hood, Front - NG (#51)	30000449
	Orifice Hood, Front - LP (#60)	30000518
36.	Orifice Hood, Rear - NG (#42)	30000332
	Orifice Hood, Rear - LP (#54)	20000130
37.	Pilot, ODS w/TP-OP #84210 - NG	1601929
	Pilot, ODS w/TP-OP #84210 - LP	1601930
38.	Valve Bracket	1409110
39.	Control Valve, Honeywell 8421	
	NG	10000235
	LP	1000-0242

	Item/Model Number	Part Number
40.	Ignition Cable	20000101
41.	Pilot Bracket	20000851
42.	Pilot Tubing	30000448
43.	Firebox	1301148
44.	Bottom	30000328
45.	Control Panel	1409136
46.	Front	1301229
47.	Cable, Control Door	1601924
48.	Spring, Control Door	1201842
49.	Control Door	1301220
50.	Control Door Handle, Wood	1600660
	Handle Stub	1601981
51.	Damper Tab (8)	1601488
52.	1/4-20 x 3/8" Phillips Screw (13)	1200993
53.	1/4-20 x 1/2" Hex Head Screw (10)	1201338
54.	1/4-20 x 1¼" Stud, Top Plate (4)	1204212
55.	Flat Washer, 1/4", 7/8 O.D. (12)	1202470
56.	1/4-20 x Hex nut, Top to Sides (5)	1203210
57.	Flat Washer, 1/4" Blk (5)	1202473
58.	1/4-20 x 1" Leg Levelling Bolt (4)	1201745
59.	#10 x 1/2" Pan Hd Sheet Metal Screw (39)	1202058
60.	8-32 x 2" Rnd Hd Slotted Screw(1)	1201243
61.	#10-24 X 1/4" Phil. Pn Hd Screw (4)	120 0980

For replacement parts, or for information about parts or service, contact your local Vermont Castings, Majestic Products Company Authorized Dealer. For the name of the dealer nearest you, call or write:

The Vermont Castings,
Majestic Products Company
410 Admiral Blvd.
Mississauga, Ontario, Canada L5T 2N6
905 670-7885

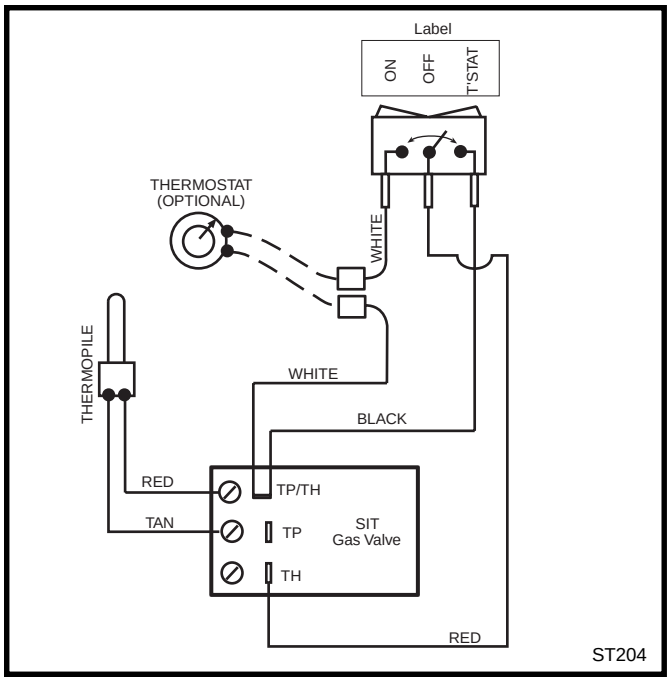


Fig. 37 RUVS40 Wiring Diagram

Warranty

Limited Three Year Warranty

The Vermont Castings, Majestic Products Comany warrants that this Radiance Natural Vent Room Heater will be free of defects in material and workmanship for a period of three years from the date you receive it, except that the glass door panel, ceramic logs, and gasketing shall be warranted for one year as described below.

The Vermont Castings, Majestic Products Company will repair or replace, at its option, any part found to be defective upon inspection by a Vermont Castings, Majestic Products Company Authorized Dealer. The customer must return the defective part or the stove, with shipping prepaid, to the Authorized Dealer or pay for any Authorized Dealer in-home travel fees or service charges for in-home repair work. It is the dealer's option whether the repair work will be done in the customer's home or in the dealer's shop. If, upon inspection, the damage is found to be the fault of the manufacturer, repairs will be authorized at no charge to the customer for parts and/or labor.

Any Radiance Natural Vent Room Heater or part thereof that is repaired or replaced during the limited warranty period will be warranted for a period not to exceed the remaining term of the original limited warranty or six (6) months, whichever is longer.

Limited One Year Warranty

The following parts of the Radiance Natural Vent Room Heater are warranted to be free of defects in material and workmanship for a period of one year from the date you receive it. These parts are the glass panel, ceramic logs, and gasketing. Any of these items found to be defective will be repaired or replaced at no charge, upon the return of said part to a Vermont Castings, Majestic Products Company Authorized Dealer with postage prepaid.

Exclusions and Limitations

1. This warranty is transferable; however, proof of original purchase is required.
2. The Vermont Castings, Majestic Products Comany offers no warranty on chipping of enamel surfaces. Inspect your Radiance Room Heater prior to accepting it for any damage to the enamel.
3. This warranty does not cover misuse of the Radiance Natural Vent Room Heater as described in the Homeowner's Installation and Operating Manual, nor does it cover a Radiance Natural Vent Room Heater that has been modified unless authorized by a Vermont Castings, Majestic Products Company representative in writing.
4. This warranty does not cover a stove repaired by someone other than either a Vermont Castings, Majestic Products Company Authorized Dealer or an authorized, qualified gas agency.
5. Damage to the unit while in transit is not covered by this warranty but is subject to claim against the common carrier. Contact The Vermont Castings, Majestic Products Company Authorized Dealer from whom you purchased your Radiance Room Heater. (Do not operate the Radiance Room Heater as this may negate the ability to process the claim with the carrier.)
6. Claims are not valid where the installation does not conform to local building and fire codes or, in their absence, to the recommendations in the Homeowner's Installation and Operating Manual.
7. The Vermont Castings, Majestic Products Company shall have no obligation to enhance or update any unit once manufactured.

IN NO EVENT SHALL THE VERMONT CASTINGS, MAJESTIC PRODUCTS COMPANY BE LIABLE FOR INCIDENTAL AND CONSEQUENTIAL DAMAGES. ALL IMPLIED WARRANTIES, INCLUDING THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS, ARE LIMITED TO THE DURATION OF THIS WRITTEN WARRANTY. THIS WARRANTY SUPERSEDES ALL OTHER ORAL OR WRITTEN WARRANTIES.

Some states do not allow the exclusion or limitations of incidental and consequential damages or limitations on how long an implied warranty lasts, so the above limitations may not apply to you. This warranty gives you specific rights and you may have other rights which vary from state to state.

8. The salt air environment of coastal areas or a high humidity environment can be corrosive to the porcelain enamel finish. These conditions can cause rusting of the cast iron beneath the porcelain enamel finish which will cause the porcelain enamel finish to flake off.

How To Obtain Service

If a defect is noted within the warranty period, the customer should contact a Vermont Castings, Majestic Products Company Authorized Dealer with the following information:

1. Name, address, and telephone number of the purchaser.
2. Date of purchase.
3. Serial number from the label on the back of the stove.
4. Nature of the defect or damage.
5. Any relevant information or circumstances, i.e., installation, mode of operation when defect was noted.

A warranty claim process will then begin. The Vermont Castings, Majestic Products Company reserves the right to withhold final approval of a warranty claim pending a visual inspection of the defect by authorized representatives.

INSTALLER:
Please record the following information for future reference.

Appliance Serial No. _____

Appliance Type: NG ____ LP ____

Inlet Supply Pressure: _____

Manifold Pressure: _____

Dealer _____

_____

Phone _____

Installer _____

_____

Phone _____

Date Installed _____

The Vermont Castings,
Majestic Products Company

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